

CLAIMS

1. Method of partially scrambling a data stream (6) including transport stream packets (7), each transport stream packet (7) having a header (8) and a payload (9), wherein a sequence of transport stream packets (7) has payloads carrying encoded data elements, arranged in units (15), including:
5 selecting transport stream packets (7) forming a sub-sequence of the sequence, and
scrambling at least part of the payloads (9) of each transport stream packet (7) in the sub-sequence, characterised by
10 monitoring the payloads (9) of at least some of the transport stream packets (7) in the sequence for the presence of data (22) indicating a boundary between two subsequent units (15), and, for selected units (15), including at least
15 one of the transport stream packets (7) carrying data forming part of the selected unit (15) in the sub-sequence.

2. Method according to claim 1, wherein the data stream (6) is a multiplex of elementary streams, the method including identifying at least one elementary stream including
20 the sequence of transport stream packets and monitoring only payloads of packets in the identified elementary stream(s).

3. Method according to claim 1 or 2, wherein the selected units (15) include units containing at least part of an encoded representation of a picture.

25 4. Method according to any one of the preceding claims, wherein each unit (15) contains an indication (25) of the type of data to follow and a part (26) containing that data, wherein the type of each unit in the monitored payloads is determined from the indication and the unit is included
30 among the selected units if the type corresponds to at least one specific type.

5. Method according to claim 4, wherein units of types other than the specific type(s) are randomly included among the selected units.

6. Method according to claim 4 or 5, wherein the types are defined by the encoding technique with which the encoded data elements have been formed.

7. Method according to any one of claims 4-6,
5 wherein the encoded data elements are decodable using a predictive decoding technique and the specific types include a type of data element allowing a prediction to be derived from only the decoded data belonging to the data element.

8. Method according to any one of claims 1-7,
10 wherein up to a maximum number of transport stream packets following a first transport stream packet carrying data forming part of a selected unit are included in the sub-sequence.

9. System for partially scrambling a data
stream (6) including transport stream packets (7), each transport stream packet having a header (8) and a payload (9),
15 wherein a sequence of transport stream packets (7) has payloads carrying encoded data elements, arranged in units (15), including:

a port for receiving the data stream; and
20 an arrangement (2-5) for processing the data in the stream, wherein the system is configured to select transport stream packets (7) forming a sub-sequence of the sequence, and to scramble at least part of the payloads of each transport stream packet (7) in the sub-sequence, characterised in that
25 the system is configured to monitor the payloads of at least some of the transport stream packets in the sequence for the presence of data (22) indicating a boundary between two subsequent units (15), and, for selected units, to include at least one of the transport stream packets carrying data forming part
30 of the selected unit in the sub-sequence.

10. System according to claim 9, configured to include up to a maximum number of transport stream packets following a first transport stream packet carrying data forming part of a selected unit in the sub-sequence, and provided with
35 an arrangement for setting the maximum number.

11. Computer program adapted, when run on a computer, to configure the computer to execute a method according to any one of claims 1-8.

12. Signal carrying a data stream (6) including transport stream packets (7), each transport stream packet (7) having a header (8) and a payload (9), wherein a sequence of transport stream packets has payloads (9) carrying encoded data elements, arranged in units (15), each unit (15) being of a certain type, wherein at least part of the payload (9) of each transport stream packet (7) in a sub-sequence, of the sequence, is scrambled, wherein for each unit (15) of a type corresponding to a selected type, the sub-sequence includes at least one of the transport stream packets (7) carrying data forming part of that unit (15), wherein at least one of the transport stream packets includes data (22) indicating a boundary between two subsequent units (15).

AMENDED CLAIMS

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1. Method of partially scrambling a data stream (6) including transport stream packets (7), each transport stream packet (7) having a header (8) and a payload (9), wherein a sequence of transport stream packets (7) has payloads carrying encoded data elements, arranged in units (15), including:
5 selecting transport stream packets (7) forming a sub-sequence of the sequence, and
scrambling the payloads (9) of each transport stream packet (7) in the sub-sequence,
10 monitoring the payloads (9) of at least some of the transport stream packets (7) in the sequence for the presence of data (22) indicating a boundary between two subsequent units (15), and, for selected units (15), including at least
15 one of the transport stream packets (7) carrying data forming part of the selected unit (15) in the sub-sequence.

2. Method according to claim 1, wherein the data stream (6) is a multiplex of elementary streams, the method including identifying at least one elementary stream including
20 the sequence of transport stream packets and monitoring only payloads of packets in the identified elementary stream(s).

3. Method according to claim 1 or 2, wherein the selected units (15) include units containing at least part of an encoded representation of a picture.

25 4. Method according to any one of the preceding claims, wherein each unit (15) contains an indication (25) of the type of data to follow and a part (26) containing that data, wherein the type of each unit in the monitored payloads is determined from the indication and the unit is included
30 among the selected units if the type corresponds to at least one specific type.

5. Method according to claim 4, wherein units of types other than the specific type(s) are randomly included among the selected units.

6. Method according to claim 4 or 5, wherein the types are defined by the encoding technique with which the encoded data elements have been formed.

7. Method according to any one of claims 4-6,
5 wherein the encoded data elements are decodable using a predictive decoding technique and the specific types include a type of data element allowing a prediction to be derived from only the decoded data belonging to the data element.

8. Method according to any one of claims 1-7,
10 wherein up to a maximum number of transport stream packets following a first transport stream packet carrying data forming part of a selected unit are included in the sub-sequence.

9. System for partially scrambling a data
stream (6) including transport stream packets (7), each transport stream packet having a header (8) and a payload (9),
15 wherein a sequence of transport stream packets (7) has payloads carrying encoded data elements, arranged in units (15), including:
a port for receiving the data stream; and
20 an arrangement (2-5) for processing the data in the stream, wherein the system is configured to select transport stream packets (7) forming a sub-sequence of the sequence, and to scramble the payloads of each transport stream packet (7) in the sub-sequence, wherein
25 the system is configured to monitor the payloads of at least some of the transport stream packets in the sequence for the presence of data (22) indicating a boundary between two subsequent units (15), and, for selected units, to include at least one of the transport stream packets carrying data forming part
30 of the selected unit in the sub-sequence.

10. System according to claim 9, configured to include up to a maximum number of transport stream packets following a first transport stream packet carrying data forming part of a selected unit in the sub-sequence, and provided with
35 an arrangement for setting the maximum number.

11. Computer program adapted, when run on a computer, to configure the computer to execute a method according to any one of claims 1-8.

12. Signal carrying a data stream (6) including transport stream packets (7), each transport stream packet (7) having a header (8) and a payload (9), wherein a sequence of transport stream packets has payloads (9) carrying encoded data elements, arranged in units (15), each unit (15) being of a certain type, wherein the payload (9) of each transport stream packet (7) in a sub-sequence, of the sequence, is scrambled, wherein for each unit (15) of a type corresponding to a selected type, the sub-sequence includes at least one of the transport stream packets (7) carrying data forming part of that unit (15), wherein at least one of the transport stream packets includes data (22) indicating a boundary between two subsequent units (15).